

R. E. SHANAHAN.
VACUUM CLEANER.
APPLICATION FILED AUG. 17, 1914.

1,233,409.

Patented July 17, 1917.

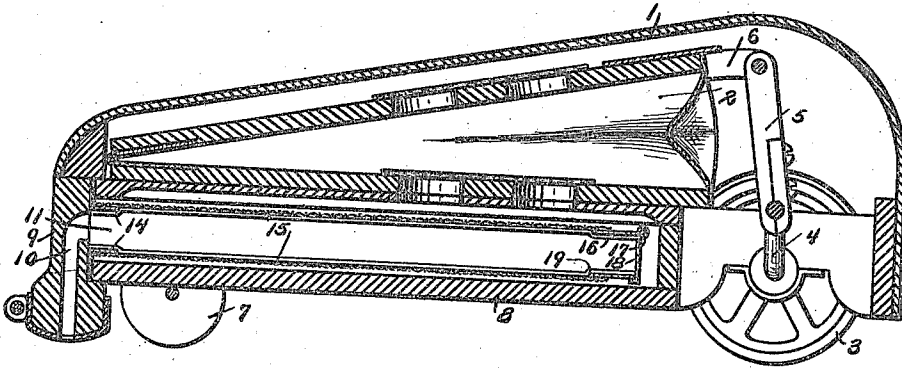


FIG. I.

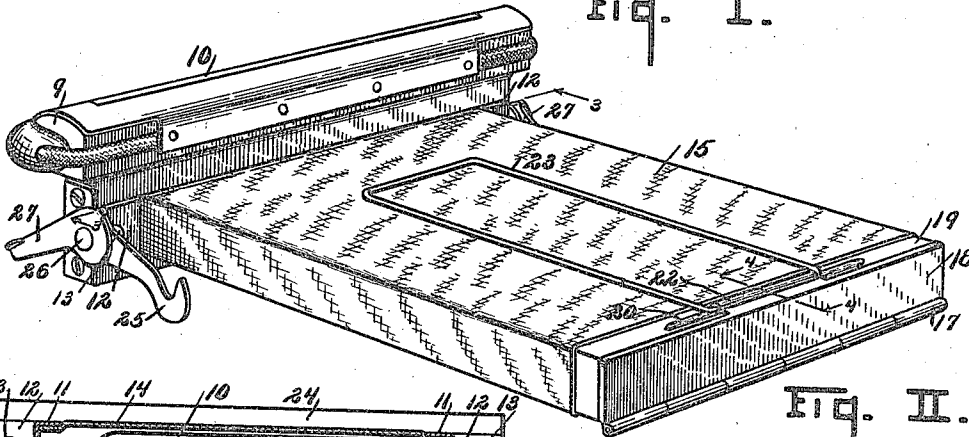


FIG. II.

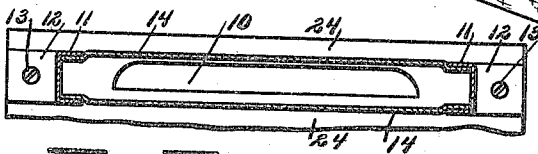


FIG. III.

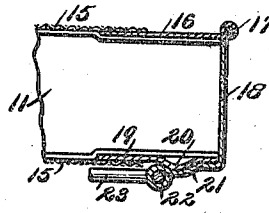


FIG. IV.

Inventors

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VACUUM-CLEANER.

1,233,409.

Specification of Letters Patent.

Patented July 17, 1917.

Application filed August 17, 1914. Serial No. 857,136.

To all whom it may concern:

Be it known that I, ROBERT E. SHANAHAN, a citizen of the United States, residing at Grand Rapids, Michigan, have invented certain new and useful Improvements in Vacuum-Cleaners, of which the following is a specification.

This invention relates to vacuum cleaners, particularly to the dust collecting and discharging means therefor.

The objects of the invention, are,

First, to provide an improved construction of dust collecting receptacle with a discharge opening and closure effectively disposed for the discharge of the contents.

Second, to provide an improved construction and arrangement of dust collecting receptacle in which the closure or door can be very readily operated without the hands of the operative coming in contact with the dust.

Further objects and objects relating to minor details and economies of construction and operation will definitely appear from the detailed description to follow.

I accomplish the objects of my invention by the devices and means described in the following specification. The invention is clearly defined and pointed out in the claims. A structure, which is a preferred embodiment of my invention, is sufficiently illustrated in the accompanying drawing, forming a part of this specification, in which:

Figure I is a longitudinal detailed sectional view through a hand-operated vacuum cleaner, in which my invention is incorporated.

Fig. II is an enlarged perspective view of the dust receptacle and attached nozzle block removed from the vacuum cleaner itself and turned bottom up.

Fig. III is a detail sectional elevation view through the dust collector, taken on a line corresponding to line 3—3 of Figs. I and II.

Fig. IV is an enlarged detail sectional elevation showing the hinge for the discharge door and the door retaining means.

In the drawing the sectional views are taken looking in the direction of the little arrows at the ends of the section lines, and similar numerals of reference refer to similar parts throughout the several views.

Referring to the numbered parts of the

drawing I have shown my invention embodied in a hand-operated vacuum cleaner which has a suitable casing 1 within which is disposed a suction bellows 2 operated by the carrying wheels 3 on the crank shaft 4 connected by pitmen 5 to the arms 6 for actuating the said bellows, which may be of any desired form. I show only one of the plurality of bellows used. The forward end of the machine is carried on the carrying wheels 7. A casing 8 is provided beneath the general casing 1 to form a chamber to receive the dust collector. A nozzle block 9 which is the closure for the chamber is provided at the front end of the machine with a suction slot 10 delivering into the dust receptacle.

The dust receptacle is made up of a frame work comprising side bars 11, 11, which are secured to a frame 14 at the intake end of the receptacle, the parts being retained in place on the nozzle block by screws 13, 13 through laterally-extending ears 12, 12 formed of the outturned ends of the said side frame bars 11. A gasket 24 surrounds these parts and is disposed to form a slight joint between the nozzle block closure 9 and the end of the casing 8. The inner or rear end of the dust receptacle is provided with an open frame 16 which is riveted or otherwise secured to the side pieces 11.

A dust collecting fabric 15, which is porous for the passage of air, surrounds the top, bottom and sides of the frame 16. To the upper side of the frame 16 is secured a door 18 by the hinge 17. The lower bar 19 of the frame 16 has a projecting portion 20 struck down therefrom and engages a corresponding depression 21 in the extended lock portion 22 of the cover 18, forming an effective snap retaining means to retain the same in closed position.

A loop-like handle 23 is rigidly secured to the extension 22 of the door and affords an effective means for opening the same without bringing the hands of the operator near the discharge mouth of the receptacle.

The handle 23 is disposed beneath the fabric 15 of the bottom side wall of the receptacle, and when the dust receptacle is removed it may be turned with the nozzle mouth upward and so prevent any accidental spilling of the contents. The door 18 may then be opened by taking hold of the handle 23 and the contents discharged

without bringing the hands of the operator into contact with the dust. Because the sides of this dust receptacle are perfectly straight and taut and smooth, the entire contents can be very readily discharged.

I desire to say, however, that this discharge door can be made in various ways, and while I have shown my preferred construction in Figs. I and II, I am aware that the same can be modified without departing from the spirit of my invention. I have shown this structure in a hand-operated vacuum cleaner, but it is adapted for use in any kind of a dust collector, whether power operated or hand operated, and whether the same be used for cleaning floors and carpets or for other purposes.

Having thus described my invention, what I claim as new and desire to secure by Letters Patent, is:

1. In a vacuum cleaner, the combination with the casing forming a chamber, of a closure detachably secured to the casing and forming the front of said chamber and provided with an inlet passage, a dust collecting receptacle comprising a frame work secured to the said closure and embracing the passage therefrom and with a door frame at its inner end, a filtering fabric embracing

said framework, a discharge door hinged to the inner end of said framework and disposed to close the said dust collecting receptacle, a snap catch for said door, and a handle secured to said door and extending into proximity to the fabric walls of said receptacle to support the same, as described.

2. In a vacuum cleaner, the combination with the casing forming a chamber, of a closure detachably secured to the casing and forming the front of said chamber and provided with an inlet passage, a dust collecting receptacle comprising a framework secured to the said closure and embracing the passage therefrom and with a door frame at its inner end comprising a lower strip having a longitudinal rib formed thereon, a filtering fabric embracing said framework, a discharge door hinged to the inner end of said framework and disposed to close the said dust collecting receptacle, and a snap catch for said door engaging said rib.

In witness whereof, I have hereunto set my hand and seal in the presence of two witnesses.

ROBERT E. SHANAHAN. [L. S.]

Witnesses:

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Copies of this patent may be obtained for five cents each, by addressing the "Commissioner of Patents, Washington, D. C."